

THAT WHICH IS CLAIMED IS:

1. A method of monitoring compliance with a service level agreement, comprising:

generating an early warning notification indicating that failure to meet a  
5 service level objective of the service level agreement by a resource is about to occur.

2. The method of Claim 1, wherein the early warning notification includes an indication of how close the resource is to failing to meet the service  
10 level objective.

3. The method of Claim 1, wherein the service level objective comprises an availability service level objective.

15 4. The method of Claim 3, wherein generating an early warning notification indicating that failure to meet a service level objective of the service level agreement by a resource is about to occur comprises:

determining if the resource is within a predefined threshold value of failing an availability requirement of the service level objective; and

20 generating an early warning notification if the resource is within the predefined threshold value of failing to comply with the availability requirement of the service level objective.

5. The method of Claim 4, further comprising:  
25 determining an amount of unavailability before the resource fails to comply with the availability requirement of the service level objective; and

wherein generating an early warning notification if the resource is within the predefined threshold value of failing the availability requirement of the service level objective further comprises generating a notification that includes the  
30 determined amount of unavailability.

6. The method of Claim 4, wherein a plurality of service level objectives are associated with the resource, the method further comprising:  
determining a service level objective of the plurality of service level objectives which the resource is closest to failing to comply so as to identify a  
5 critical service level objective; and  
wherein generating an early warning notification if the resource is within the predefined threshold value of failing to comply with the availability requirement of the service level objective comprises generating an early warning notification for the critical service level objective.
- 10 7. The method of Claim 6, wherein the early warning notification is generated for the critical service level objective and not generated for other service level objectives in the plurality of service level objectives.
- 15 8. The method of Claim 6, further comprising:  
determining if the resource fails to comply with the availability requirement of the critical service level objective;  
determining a next service level objective of the plurality of service level objectives with which the resource is closest to failing to comply so as to identify a  
20 subsequent critical service level objective; and  
generating an early warning notification for the subsequent critical service level objective.
- 25 9. The method of Claim 6, further comprising:  
determining an amount of unavailability before the resource fails to comply with the availability requirement of the critical service level objective; and  
wherein generating an early warning notification further comprises generating a notification that includes the determined amount of unavailability.
- 30 10. The method of Claim 1, wherein generating an early warning notification comprises sending a message to a console, generating an e-mail

message, setting a simple network management protocol trap and/or updating a database and generating a report from the updated database.

11. A method of monitoring compliance with an availability service  
5 level agreement, comprising:  
determining a maximum down time (MADT) for a resource to comply with  
the service level agreement;  
determining an early warning threshold (ewdt) based on the maximum  
down time;  
10 monitoring accumulated down time (A) for the resource since a beginning  
of a compliance period associated with the service level agreement;  
determining if the accumulated down time for the resource exceeds the  
early warning threshold; and  
generating an early warning notification if the accumulated down time of  
15 the resource exceeds the early warning threshold.

12. The method of Claim 11, wherein generating an early warning  
notification if the accumulated down time of the resource exceeds the early  
warning threshold comprises generating a notification that includes a remaining  
20 time before the accumulated down time of the resource exceeds the maximum  
down time.

13. The method of Claim 12, wherein monitoring accumulated down  
time comprises:  
25 receiving notification that the resource is down; and  
incrementing the accumulated down time while the resource is down.

14. The method of Claim 12, wherein monitoring accumulated down  
time comprises periodically polling a resource to determine the accumulated down  
30 time of the resource.

15. The method of Claim 12, wherein monitoring accumulated down time comprises polling a resource information data source to determine the accumulated down time of the resource.

5           16. The method of Claim 11, wherein determining a maximum down time (MADT) for a resource to comply with the service level agreement and determining an early warning threshold (ewdt) based on the maximum down time are repeated for a plurality of service level agreements;

              wherein determining if the accumulated down time for the resource  
10 exceeds the early warning threshold comprises determining if the accumulated down time for the resource exceeds a minimum early warning threshold of the early warning thresholds for the plurality of service level agreements; and

              wherein generating an early warning notification if the accumulated down time of the resource exceeds the early warning threshold comprises generating an  
15 early warning notification if the accumulated down time of the resource exceeds the minimum early warning threshold.

17. A system for monitoring compliance with a service level agreement, comprising:

20           means for monitoring a resource for a characteristic specified by the service level agreement; and

              means for generating an early warning notification indicating that failure to meet a service level objective of the service level agreement by the resource is about to occur.

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18. The system of Claim 17, wherein the early warning notification includes an indication of how close the resource is to failing to meet the service level objective.

30           19. A system for monitoring compliance with an availability service level agreement, comprising:

means for determining a maximum down time (MADT) for a resource to comply with the service level agreement;

means for determining an early warning threshold (ewdt) based on the maximum down time;

5 means for monitoring accumulated down time (A) for the resource since a beginning of a compliance period associated with the service level agreement;

means for determining if the accumulated down time for the resource exceeds the early warning threshold; and

10 means for generating an early warning notification if the accumulated down time of the resource exceeds the early warning threshold.

20. A computer program product for monitoring compliance with a service level agreement, comprising:

15 a computer readable medium having computer readable program code embodied therein, the computer readable program code comprising:

computer readable program code configured to generate an early warning notification indicating that failure to meet a service level objective of the service level agreement by a resource is about to occur.

20 21. The computer program product of Claim 20, wherein the early warning notification includes an indication of how close the resource is to failing to meet the service level objective.

22. A system for monitoring compliance with an availability service level agreement, comprising:

25 a computer readable medium having computer readable program code embodied therein, the computer readable program code comprising:

computer readable program code configured to determine a maximum down time (MADT) for a resource to comply with the service level agreement;

30 computer readable program code configured to determine an early warning threshold (ewdt) based on the maximum down time;

computer readable program code configured to monitor accumulated down time (A) for the resource since a beginning of a compliance period associated with the service level agreement;

- 5      computer readable program code configured to determine if the accumulated down time for the resource exceeds the early warning threshold; and

computer readable program code configured to generate an early warning notification if the accumulated down time of the resource exceeds the early warning threshold.